Homework 89 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Minimum Area within an Area Period\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Directions: Show all your work or LASALLE will be given.

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| 1) Dee is going to cover her front porch with bricks and she plans to put the bricks next to each other so there is no space in between them. The bricks are rectangular prisms that measure 1 inches long by 3 inches wide by 6 inches tall. If Dee’s porch is a rectangle that measures 11 feet by 8 feet, what is the minimum number of bricks that she will need to fully cover her porch?  Step 1: Find MAX surface area of the brick  Step 2: Find area of the backyard  Step 3: Check/convert units if needed  Step 4: Find # of bricks | 2) A teacher wants to cover his bulletin board with student work. The board is 2 feet wide and 8 feet tall. Without overlapping, how many student papers can he staple onto the board if they are each 8.5 x 11 inches?  Step 1: Find MAX surface area of the paper  Step 2: Find area of the board bulletin  Step 3: Check/convert units if needed  Step 4: Find # of papers |
| 3. Jessica is going to cover her patio with bricks and she plans to put the bricks next to each other so there is no space in between them. The bricks are rectangular prisms that measure 4 inch tall by 2 inches wide by 8 inches long. If Jessica’s patio is a rectangle that measures 8 feet by 11 feet, what is the minimum number of bricks that she will need to fully cover her porch? | 4. A teacher wants to cover his bulletin board with student work. The board is 8 feet wide and 10 feet tall. Without overlapping, how many student papers can he staple onto the board if they are each 8.5 x 11 inches? |
| 5. Dee is going to cover her front porch with bricks and she plans to put the bricks next to each other so there is no space in between them. The bricks are rectangular prisms that measure 2 inches long by 4 inches wide by 8 inches tall. If Dee’s porch is a rectangle that measures 10 feet by 6 feet, what is the minimum number of bricks that she will need to fully cover her porch? | 6. A balcony is 5 feet by 6 feet. What is the area of the balcony in inches? |
| 7. Find the surface area and volume of the figure below. Leave it in terms of π.  *r* = 12 in.; *h* = 18 in. | 8. Find the surface area and volume of the figure below. |